

ABSTRACT

A polymer electrolyte membrane is put between two gas diffusion electrodes and the whole is pressed at a pressure until the bonding temperature is reached and then pressed at the bonding pressure not lower than the pressure applied in the preceding step, whereby MEAs are obtained. The state of bonding of the polymer electrolyte membrane and the gas diffusion electrodes to each other is improved. The internal resistance is reduced and the three-phase interface is made to assume a three-dimensional structure to enlarge the reaction area, and polymer electrolyte fuel cells with higher output can be materialized by using the MEA.